

EPA Response to Hurricane Harvey

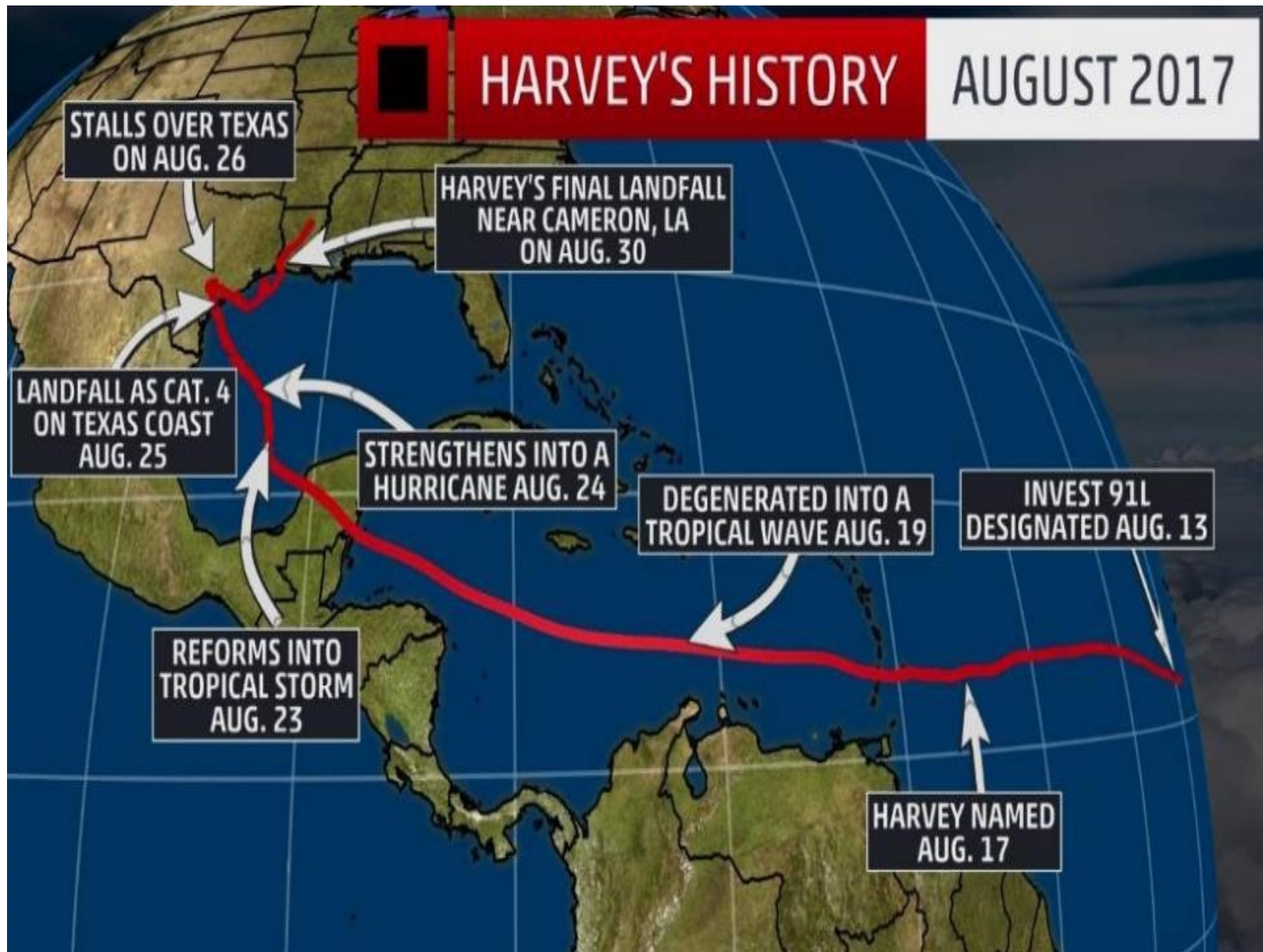
Carl Edlund
Director, Superfund Division
Region 6

1/23/2018



HARVEY'S HISTORY

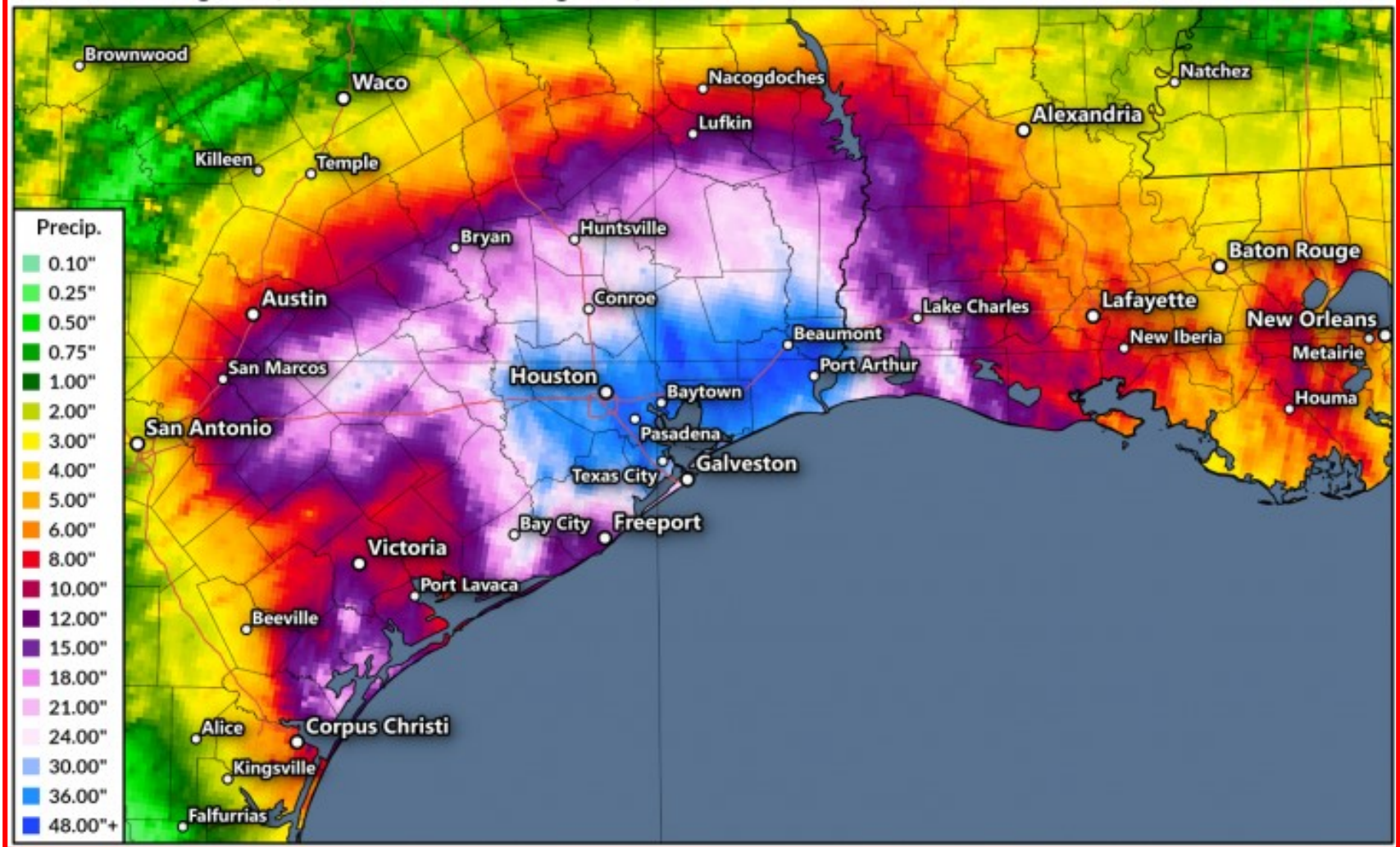
AUGUST 2017



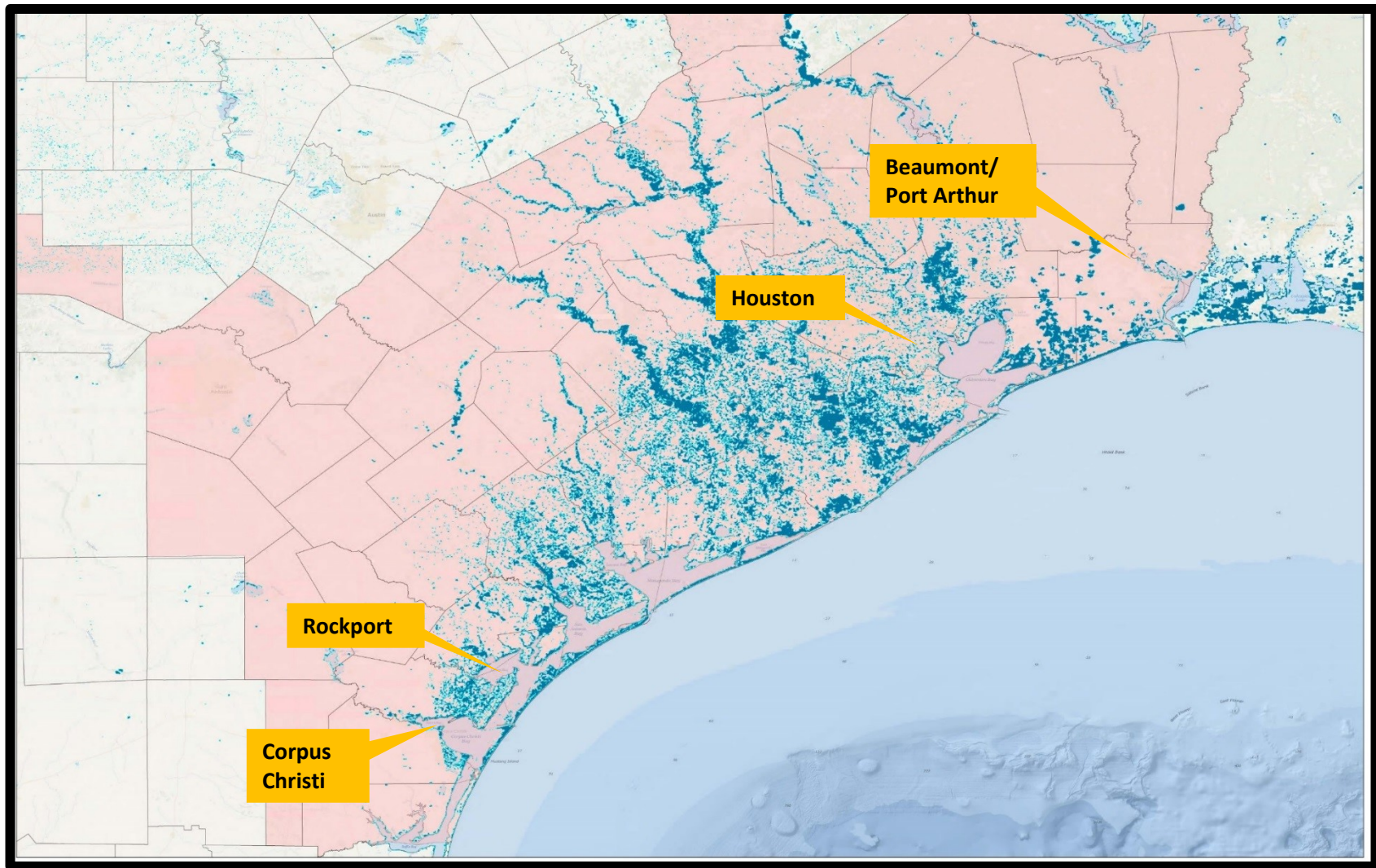
Hurricane Harvey Rainfall

Observed Precipitation Totals
7:00 AM CDT August 23, 2017 – 7:00 AM CDT August 30, 2017

Map: Dennis Mersereau | [@wxdam](#)
Data: NOAA / NWS



Hurricane Harvey Flooding



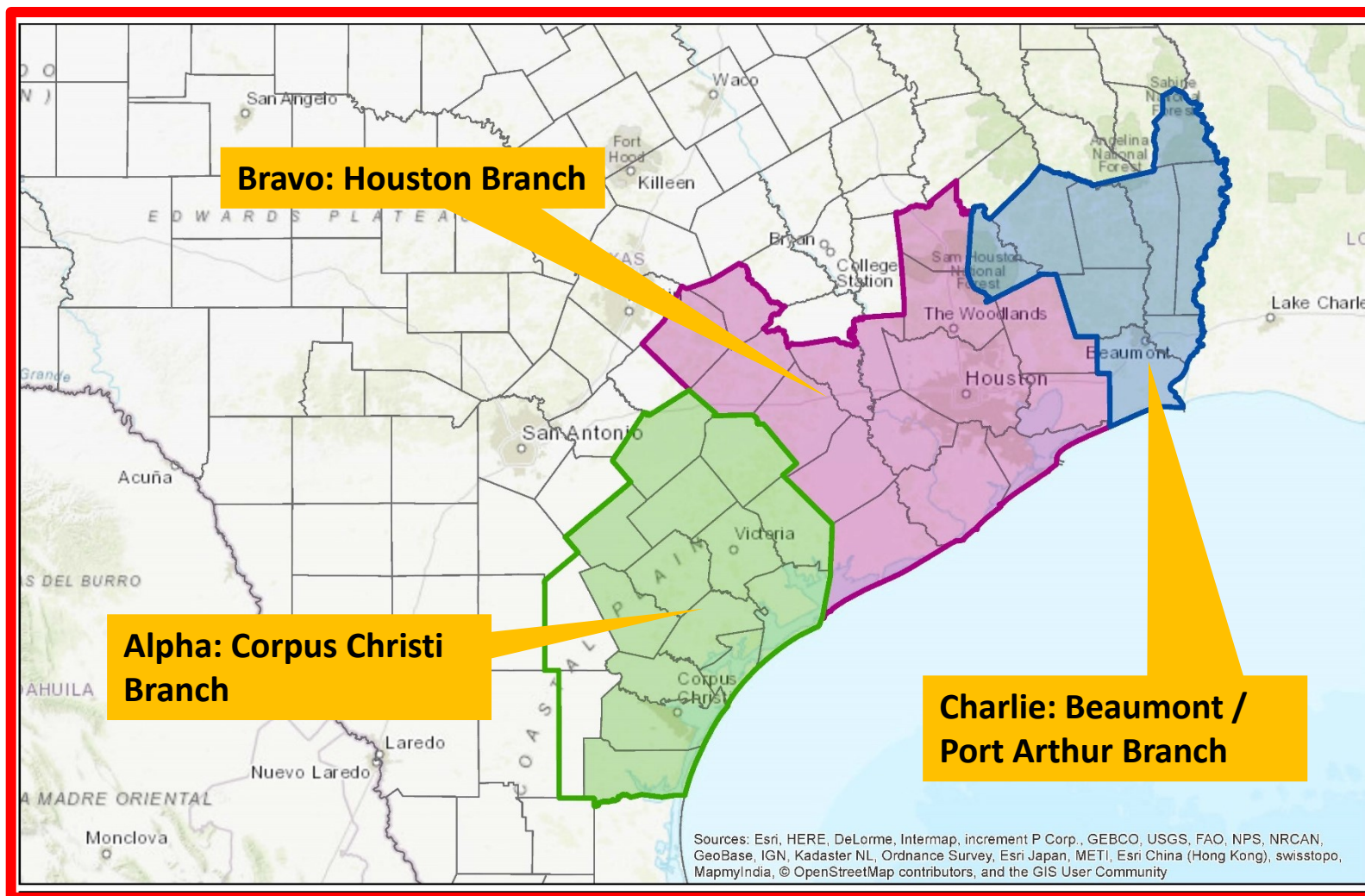
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UNIFIED COMMAND



Theater of Operations





Unified Command Mobile Command Post

1/23/2018



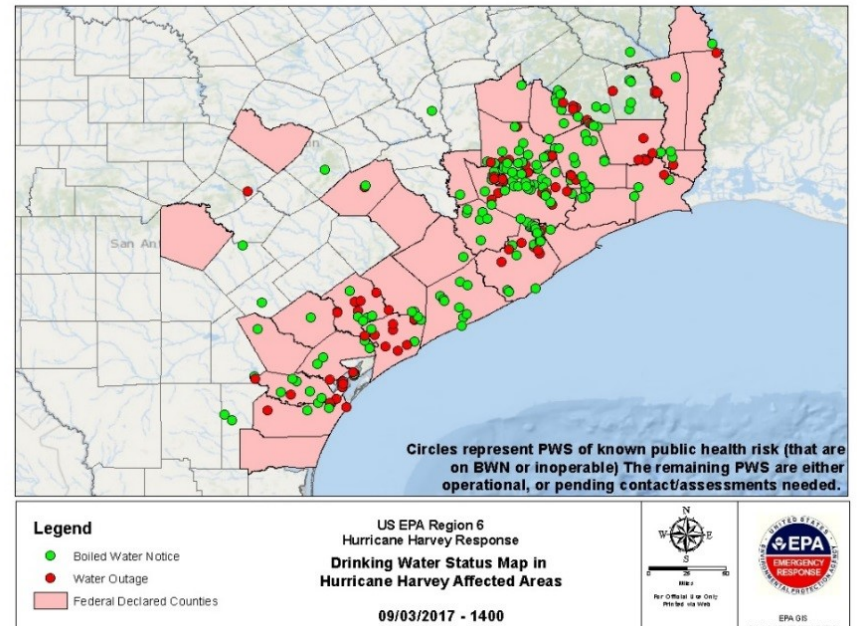
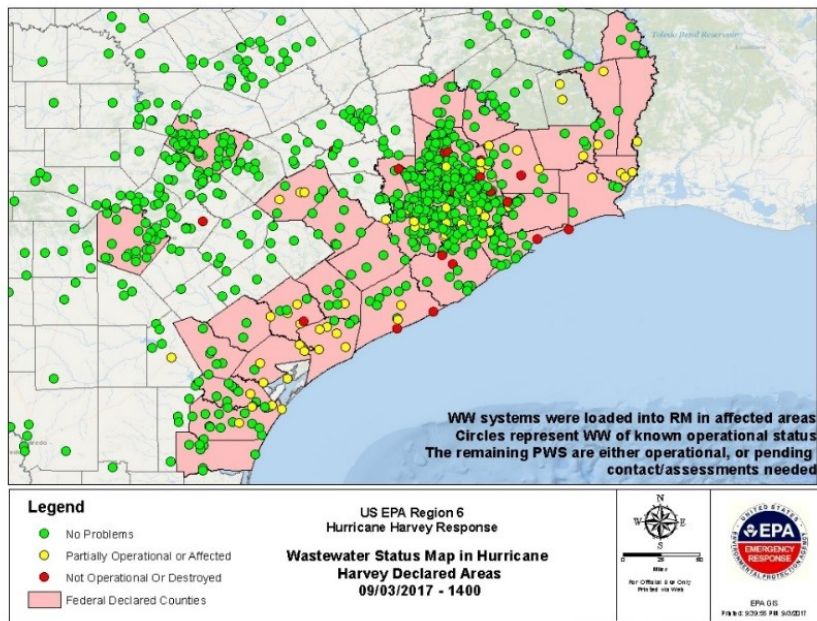
Command & General Staff Meeting, Corpus Christi, TX



1/23/2018



Drinking Water / Waste Water Assessments



Orphaned Container Recovery

Port Arthur



Port Aransas



Corpus Christi



1/23/2018



Support to TCEQ / Staging Area Observers



1/23/2018



Superfund Sites



1/23/2018



ASPECT Activities

- RMP & FRP assessments
- Pipelines
- Refineries
- Releases at chemical and oil facilities
- Releases and orphan containers

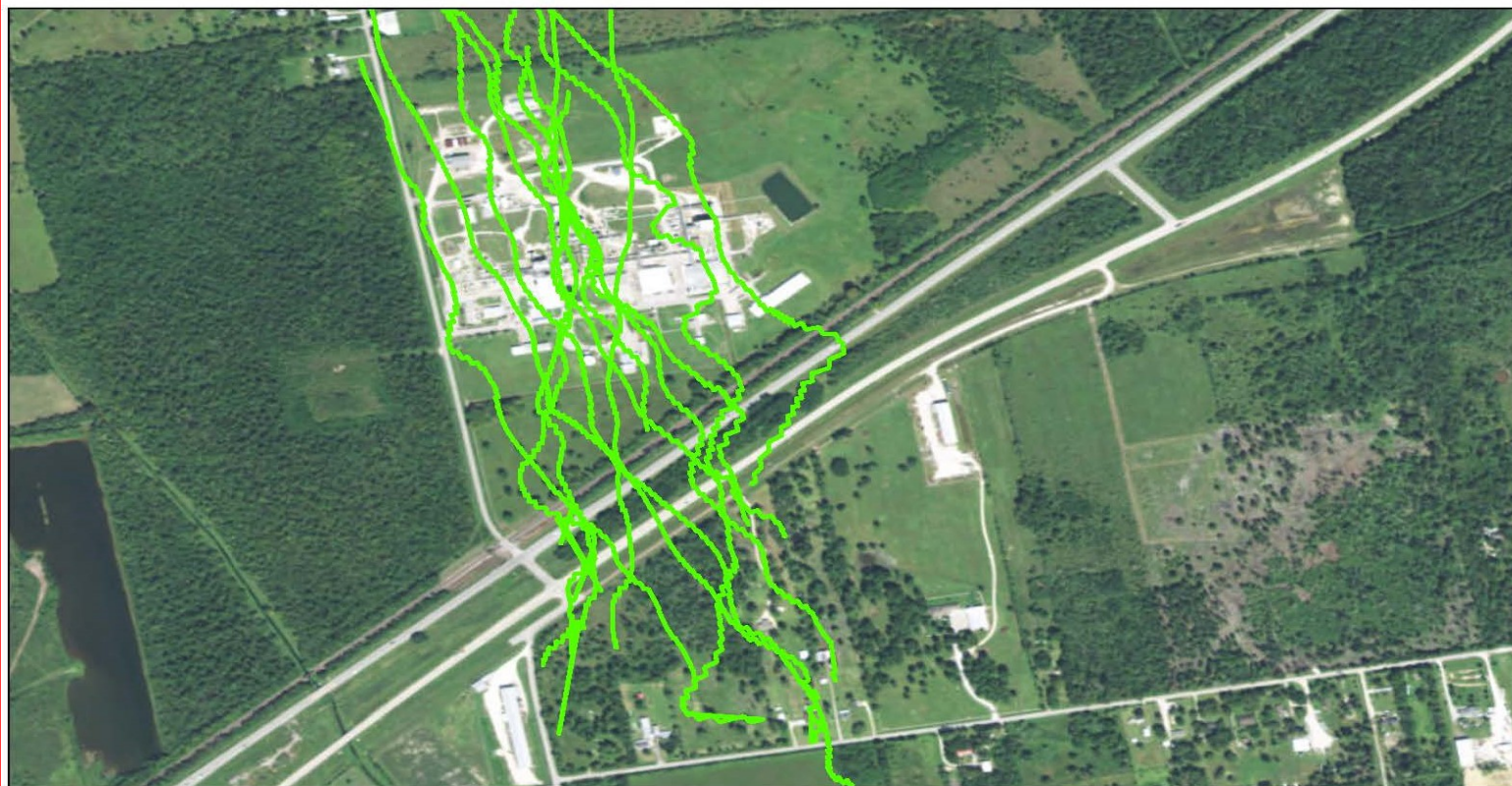


Arkema Chemical Facility, Crosby, TX



1/23/2018





Chemical Compounds	Short-term AMCV (ppm)
1,1-dichloroethane	1.0
1-butene	27
acetone	11
dichlorodifluoromethane	10
ethyl acetate	4
ethylene	500
isobutane	33
methyl ethyl ketone	20
methylene chloride	3.4
n-butyl acetate	7.4
n-propyl acetate	2
propylene	Simple Asphyxiant
vinyl chloride	27

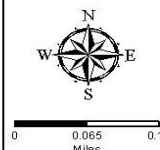
Legend

— No Readings Above Benchmarks

What's an AMCV?

AMCV is a collective term used to describe chemical-specific air concentrations used to evaluate air monitoring data that are set to protect human health and welfare. Short-term AMCVs are based on data concerning acute health effects. **AMCVs** may contain health-based Reference Values (ReVs) and health- and welfare-based ESL values. AMCVs are screening levels used in TCEQ's evaluation of ambient air monitoring data to assess the potential for measured concentrations of specific chemicals to cause health or welfare effects. Health-based AMCVs are safe levels at which exposure is unlikely to result in adverse health effects. ESLs are screening levels used in the TCEQ's air permitting process to establish maximum emission rates that are written into enforceable air permits. Health-based ESLs are set 70 percent lower than the safe level, or AMCV. This additional buffer allows TCEQ to take into account exposure to chemicals from multiple sources in air permit reviews.

USA EPA REGION 6 Flight 13 ASPECT



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EPA GIS
Printed: 2:46:34 PM 9/8/2017

FILE: F:\Weston_Harvey\mod\20170908\ASPECT\Flight13_20170908.mod 2:46:34 PM 9/8/2017 thumbnail

TAGA Monitoring Activities



- Refineries
- Sensitive communities
- Chemical manufacturing

EPA TAGA Data for Houston & Valero BENZENE Max 20170906



Texas Commission on Environmental Quality
OS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087
Date: 9/22/2017



BENZENE_MAX

- 0.00 - 0.27
- 0.28 - 0.74
- 0.75 - 1.45
- 1.46 - 2.52
- 2.53 - 4.39
- 4.40 - 7.24
- 7.25 - 15.98



This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resources Division at (512) 239-4180.

CRP 20170906BENZENE

1/23/2018



PHILIS Analytical Activities

- On- Site Releases
- Staging area sampling
- Superfund sites



Community Liaisons



Accomplishments

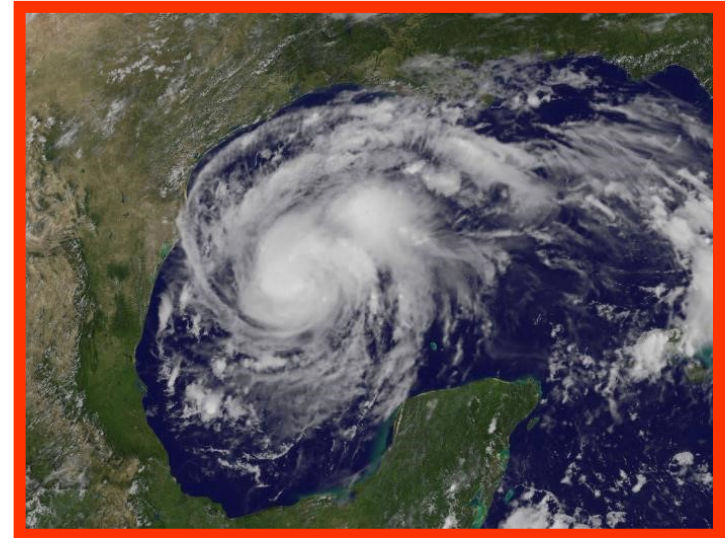
- 648 Hazard Evaluations completed
- 256 spills investigated
- 1,055 orphan containers recovered
- 2,000 drinking water assessments completed
- 1,200 waste water assessments completed
- Daily aerial over-flights for air monitoring
- Fuel waivers and No Action Assurance letters issued



Accomplishments cont.

- 7 fuel waivers signed, 7th waiver covers 38 states
- 4 No Action Assurance letters signed
- Ground support air monitoring
- 43 NPL site evaluations completed
- EPA fully integrated with TCEQ, TGLO and USCG in Unified Command





EPA Response to Hurricane Harvey - a look behind the scene

Carl Edlund
Director, Superfund Division
Region 6

1/23/2018



Typical Daily Schedule

4:00 am – REOC Opens, morning status report drafted

5:30 am – Draft morning status report to SF Division Director

6:00 am – Draft morning status report to Deputy 6AX, RA & RA

7:00 am – Morning Status Report released by DRA, 6AX update of web site

8:00 am – Staff conduct TX operations call; RA/DRA calls to HQ/ Unified Command/TCEQ

8:30 am - Regional Incident Coordination Team management a.m. meeting with SF/DD

9:00 am – REOC Meeting/Daily Briefing

12:00 pm – SF Division Director coordination brief with other DD's, [RA, DRA also]

1:00 pm – Removal Manager Call with Regions & HQ

1:30 pm – Submissions due for draft evening status report

3:00 pm – Draft evening status report to SF Division Director

3:30 pm - Draft evening status report to 6AX, DRA & RA

4:30 pm – Regional Incident Coordination Team management p.m. meeting with SF/DD

5:00 pm - Evening Status Report released by DRA; 6AX update of web site.
Operations call with Incident Management Team

9:00 pm – Submissions due for morning status report

Response Website



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HURRICANE HARVEY 2017



DALLAS, TX - REGION VI



[KML](#) | [RSS](#) | [area map](#) | [bookmark](#)

Site Contact:

Public Affairs
press@epa.gov

Dallas, TX 75202
response.epa.gov/Hurricaneharvey2017

[Edit Site Info](#)

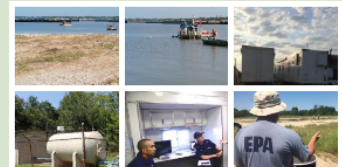
[Edit Contaminants](#)

RESOURCES

Notices

None for this site

Images



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Documents

[Southern Shipyard Validated Da...](#)
[PRP Dive Team Sample Results f...](#)
[EPA Dive Team Sample Results f...](#)
[Hurricane Harvey ESF-10 SITREP...](#)
[List All...](#)

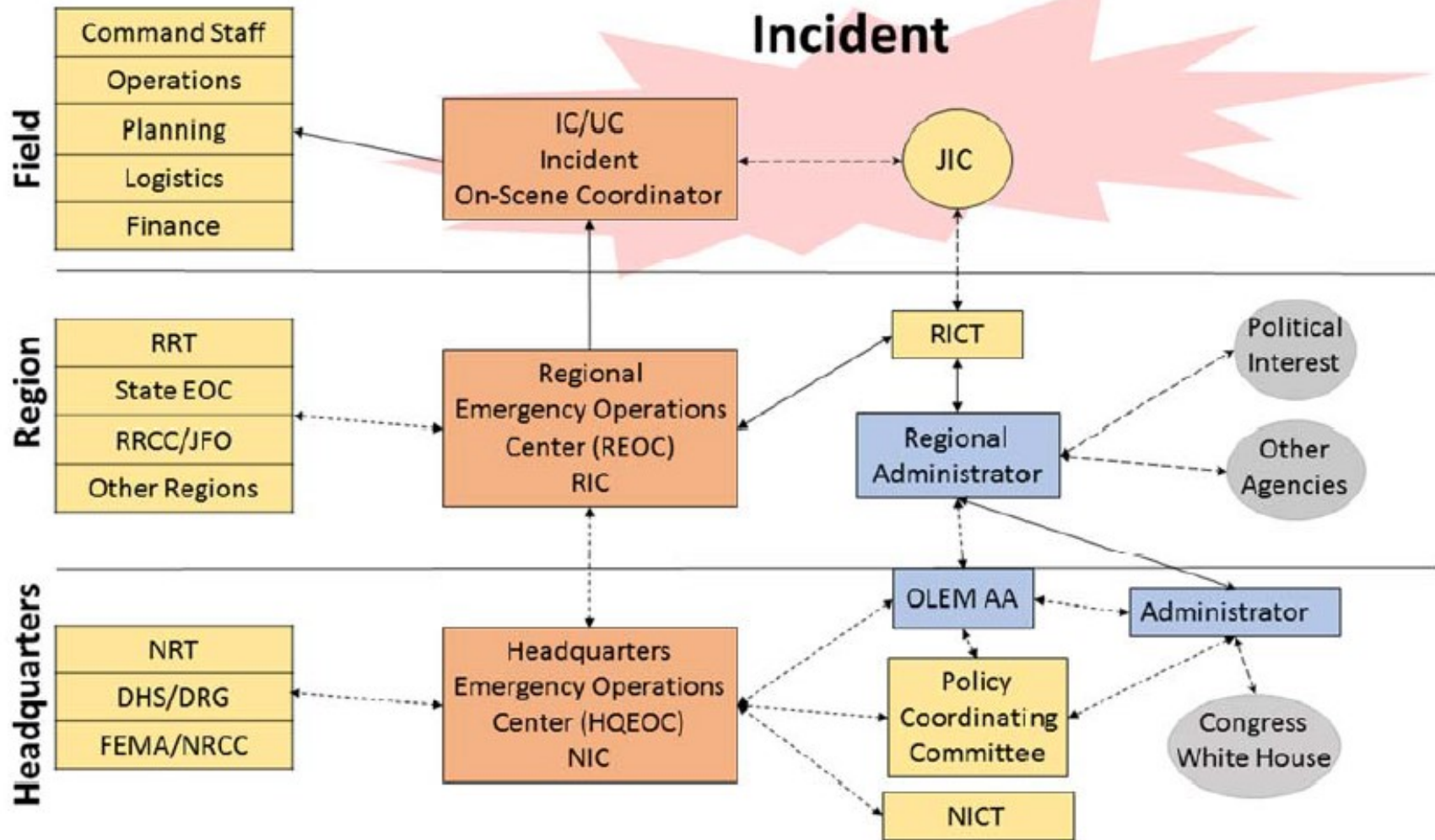
[Pol/SitReps](#)

Check out our Hurricane Harvey Story Map [here](#).

To report fraud, waste or abuse impacting EPA, please contact the EPA OIG Hotline by calling 202-566-2476 or toll-free 888-546-8740, by faxing 202-566-2599, or by emailing at oig_hotline@epa.gov.

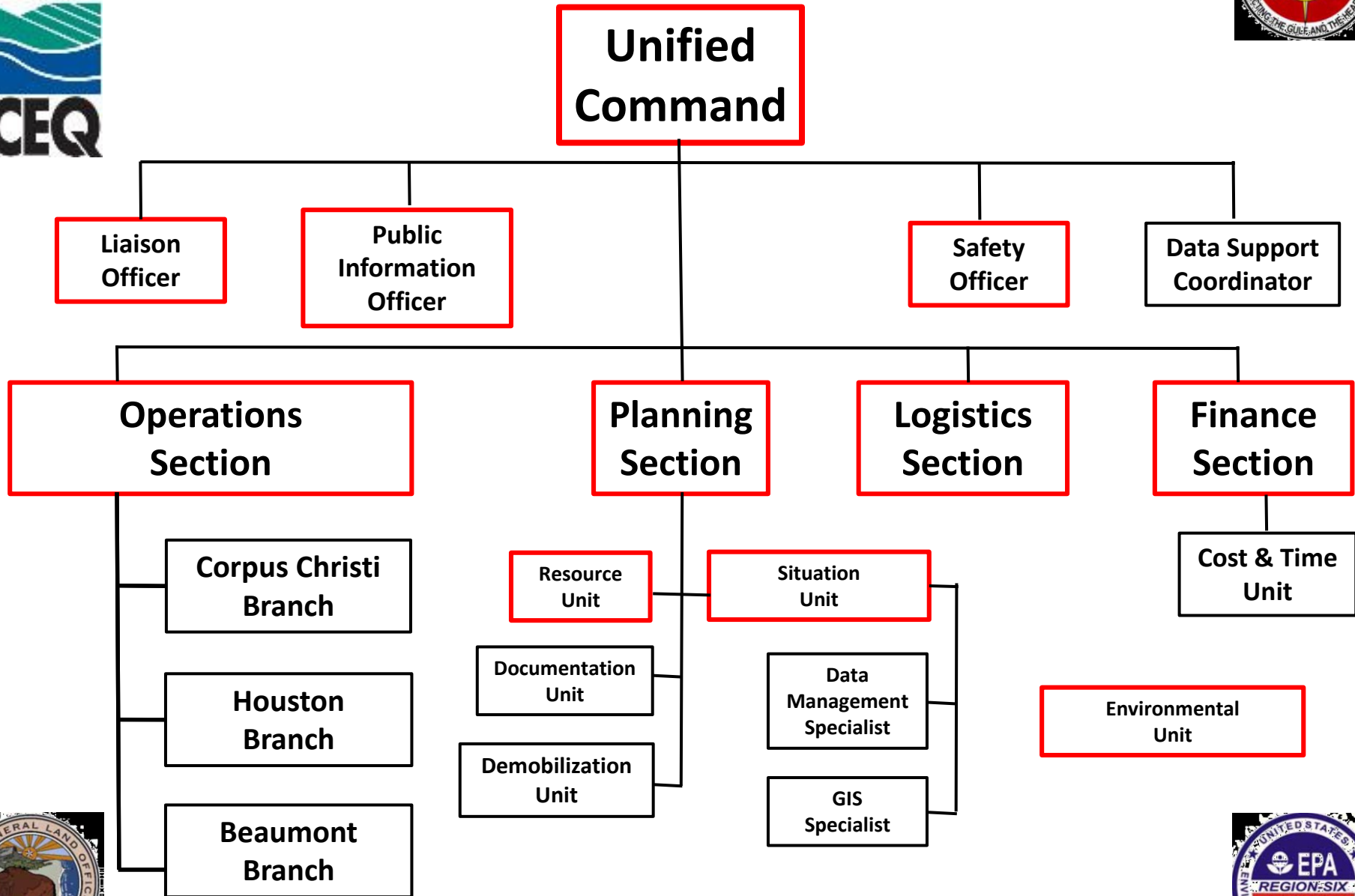
EPA has created an online repository for [Hurricane Harvey Response Documents](#).

Incident





Unified Command Organization Chart



REGIONAL COORDINATION

RIC / REOC / FIELD

